

Amendments to the Claims:

1. (Currently amended) A method of simulating service loads comprising the steps of:
 - a) developing a service load history database including multiple time series models representative of different service load conditions;
 - b) combining the multiple time series models to form a simulation test service load model for a time span of a testing object, wherein each time series model is included in the simulation test service load model in a proportion that is based on an estimated time within the time span for which the service load condition associated with the respective time series model will be applicable;
 - c) adjusting a parameter variance of each of the time series models of the simulation test service load model and creating an accelerated service load model;
 - d) regenerating random vibration load data based upon the accelerated service load model; and
 - e) feeding the random vibration load data to a drive simulation system to thereby cause the drive simulation system to simulate service loads in accordance with the random vibration load data.
2. (Previously presented) The method as recited in claim 1 wherein said step of developing a service load history database further comprises modeling original random vibration service loads in different time series models.
3. (Currently amended) The method as recited in claim 2 wherein said step of adjusting the parameter variance of each of the time series models further comprises changing a value of a variance σ_a^2 , where

$$f(\omega) = \frac{\Delta \sigma_a^2}{2\pi} \frac{1}{|e^{\frac{j\omega\Delta}{\Delta}} - \phi_1 e^{\frac{(n-1)\omega\Delta}{\Delta}} - \dots - \phi_n|^2}, -\frac{\pi}{\Delta} \leq \omega \leq \frac{\pi}{\Delta}.$$

wherein $f(\omega)$ is an autospectrum of the time series model for a sampling interval Δ as a

function of angular frequency ω , and wherein \mathcal{O}_i represents said parameter of each of the time series models for $i=1\dots n$.

4. (Original) The method as recited in claim 3 wherein said step of regenerating the random vibration load data is based upon a recursive formula.

5. (Original) The method as recited in claim 4 wherein said step of feeding the load data to a drive simulation system further comprises converting a digital signal to an analog signal and transmitting said analog signal to actuators.